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CONFLICTING RIGHTS OF TELEPHONE LINES AND SINGLE TROLLEY ELECTRIC RAILWAYS IN THE HIGHWAYS.

THE electric lines which are ordinarily found in the highways may be divided into three classes: —

1. Wires for the transmission of intelligence by electricity, including telegraphs, telephones, fire alarms, police signals, and a few others of similar use. These wires transmit an electric current of very slight potential, and are wholly harmless.

2. Wires for the transmission of electric power for the operation of electric railways. These wires are the overhead trolley wires, and transmit a current of about 500 volts, and are considered harmless to human beings so far as permanent ill effects from shocks are concerned, except in case of very weak or nervous people. The current is strong enough, however, to give a serious temporary shock to human beings, and is often fatal to horses.

3. Wires for the transmission of electric light, heat, and power for mechanical purposes. These wires transmit currents of very high potential, which in case of the direct electric light current is generally in the neighborhood of 2,500 to 3,000 volts, and in case of alternating currents is of much greater destructive force. The electric light current is fatal to human life if taken in its full strength.

There are occasional conflicts between all these various kinds of wires as to the occupation of the highways, for the stronger current of one kind will, under circumstances of proximity, affect

the operation of the weaker current, but the chief conflict is that which has arisen between the telephone lines and the single trolley electric railway, and this article will be limited to the investigation of the respective rights of these two classes of lines in the highways.

The main features of the construction of telephone lines and electric railway lines are now familiar to every one, but there is one point which may not be wholly understood, and which is important in the following discussion. The telephone line in its original form of construction—and the same form is in use at the present time in many places—does not contain a complete metallic circuit, by which the current can start from the speaking telephone or transmitter, travel to the hearing telephone or receiver, and then return to the speaking telephone, but the wire, after reaching the hearing telephone, is led to some adjacent gas or water pipe in the building, or other convenient conductor, over which the current can pass into the ground. It is evident that this connection with the ground through the gas pipe or other conductor forms an economical mode of construction, but it has an objection,—that it furnishes a suitable means for a stronger electric current to travel up the conductor into the hearing telephone, just as it does for the telephone current to travel down the conductor into the earth. Hence comes the difficulty with the electric railways, for the electric railway, built according to the single trolley system, uses in a similar way the ground for the return current; that is, the dynamo at the power station generates the electric current which flows out over the trolley wire, thence into the trolley on the car, and by a wire in the trolley pole down through the controllers into the motor in the car, and thence by the car axle and wheels and rails into the ground.

The injury which the electric railway current does to the use of telephones is of two kinds:—

1. Conduction, as it is technically called, or leakage. The comparatively strong current of the trolley car, after escaping into the ground, finds an easy path along the gas or water pipes in the street, and into private premises, until it reaches the point at which the telephone wire is attached, thence up the wire into the telephone and through it, to the central exchange. This passage of the railway current into the telephones produces buzzing and cracking noises in the telephones, confuses the sound of the voices, and renders the conversation unintelligible. It also rings the call bells

and causes the annunciators in the exchange to fall when no call had been made, and does other mischief.

2. Induction. This is a more obscure and difficult phenomenon, but it appears that when the wires of a telephone are near the trolley wire and parallel to it the strong current of the trolley, varying in its strength as the cars are started or stopped, or from other causes, *induces* a current on the telephone wires which varies as the trolley current does, and thus interferes with the telephone current and causes confusing noises in the telephone.

As soon as the electric railway was introduced into the streets, it became evident that the effect of these two kinds of interference was wholly to destroy the usefulness of the telephone. Customers would not continue to use telephones when their ears were greeted with a pandemonium of strange noises, amid which the words of their interlocutor were unintelligible or very confused. There were three more or less efficient modes of remedying the trouble: —

1. The use of the double trolley system on the railway, that is, having two trolley wires over the track and two trolley poles on every car, so that the current would pass from one wire and trolley into the car motor, and then return to the other wire, and so back to the generator. By this system, the railway current is not discharged into the ground at all.

2. The use of an all-metallic circuit for the telephone lines, so that there should be no chance for the railway current to get at the telephone lines.

3. The McCluer device, so called, which is in effect a single return wire for several telephone lines. This device is cheaper than a metallic circuit for every line, and may be so arranged as to obviate to a great degree both kinds of disturbance.

The question before the companies was, therefore, which company must make the change. Had the telephone company the right to compel the electric railway to adopt the double trolley system on penalty of ceasing operations? Had the electric railway company the right to compel the telephone company to adopt the all-metallic circuit, or McCluer device, on the same penalty?

Almost immediately upon the installation of the earliest electric railways followed the first suit brought by the telephone companies to restrain the electric railways from using the highways. In January, 1889, a case was decided on this point in the Court of

Common Pleas for Summit County, Ohio,¹ and in June of that year a case in the Chancery Court of Chattanooga, Tenn.,² brought up the same question. These cases, however, were merely skirmishes. The first great action was begun at Albany, N. Y., in the fall of the same year, and was the case of Hudson River Telephone Co. v. Watervliet Turnpike & Railway Co. In November of this year, the telephone company succeeded in getting a temporary injunction against the operation of the electric road until the case could be heard on its merits. The court (Mayham, J.), in granting this injunction, expressly declined to go into the merits further than to hold that it was a fitting case for a temporary injunction under the New York Code for reasons of only local importance. The court, however, in ordering the injunction, required the telephone company to give bonds in the sum of \$10,000 to protect the defendant in case it succeeded at the final hearing of the case. The care of the court to make clear that the granting of the temporary injunction was in no sense a determining of even the *prima facie* merits of the case, is shown by its language: "In reaching a conclusion that a temporary injunction should be granted on this motion, I have intentionally avoided any discussion or determination of the somewhat new but very important questions involved in this action, which should have a careful trial upon their merits, and a speedy determination."³

This decision was followed by an appeal to the General Term of the same court by the railway company. The appeal was decided in the February term, 1890,⁴ and the merits of the case were considered, the court taking the view that both parties were lawfully in the streets, and that, as the telephone had a prior franchise from the authorities, this franchise should be protected; but as the difficulty might be obviated by a metallic circuit for the telephone, such a circuit must be built so that both parties could use the street, and the railway company must pay the cost of constructing the metallic circuit because it made the metallic circuit necessary. In the Court of Appeals, to which this branch of the case was next taken, the temporary injunction was continued solely on the ground that the granting of it was in the discretion

¹ Central Union Telephone Co. v. Sprague Electric Railway & Motor Co. et al., 2 Am. El. Cas. 307.

² East Tennessee Telephone Co. v. Chattanooga Electric Street Railway Co., 2 Am. El. Cas. 323.

³ Pamphlet Opinion of Mayham, J., p. 8.

⁴ 56 Hun, 67.

of the court of original jurisdiction, and such discretion could only be reviewed by the General Term. The Court of Appeals, however, gave an intimation of its opinion on the merits as follows: "We have examined with care the questions involved in this case, and we are compelled to say that we entertain very grave doubts whether, upon the facts stated in the complaint and affidavits, any cause of action exists in favor of the plaintiff, and whether the plaintiff has any remedy for the injury of which it complains, except through a readjustment of its methods to meet the new conditions created by the use of electricity by the defendant, under the system it has adopted."¹ The court, however, gave no intimation of the reason for this view.

In the mean time the trial of the case on its merits was being rapidly pushed forward. It went first to a referee to take evidence and find the facts. Numerous experts were examined before him by both parties, with the usual result of conflicting expert testimony in mixing up the case almost beyond comprehension. The referee then proceeded to make a decision which was somewhat unintelligible (Nov. 21, 1890), finding all the material facts in favor of the telephone company; as, for instance, that it would cost much less to change the railway equipment from the single trolley to the double trolley system than it would to change the telephone to an all-metallic circuit, and also that the double trolley system was quite practicable, and yet holding that on the pleadings and the proof the telephone company had not established a cause of action. Why it had not, the referee also left in profound mystery, and on appeal to the General Term of the Supreme Court that court promptly reversed the judgment, discharged the referee, and ordered a new trial.

The leading idea of the General Term in taking this action was the maxim, *Sic utere tuo ut alienum non lædas*. The court says, "The sound and just elementary principle still prevails, that a party must so use his own property as not to injure his neighbor."²

Meanwhile street railways all over the United States were being equipped with the single trolley electric system, and it became evident that, whatever the courts might decide, the railway had come to stay and was a great public benefit. It was not long, as time is measured in lawsuits, before the Court of Appeals (Oct., 1892) gave a final and authoritative statement of the law

¹ 121 N. Y. 405, June 3, 1890.

² 61 Hun, 152, Sept., 1891.

on the subject as applied in New York,¹ in favor of the railway company. The principle of the decision we will discuss later.

While this case was going through its successive stages in New York, the telephone and electric railway were waging war at other points along the line from New York to Utah. In Cincinnati a lively fight was carried on in the case of City & Suburban Telegraph Association *v.* Cincinnati Inclined Plane Railway Co.² The Superior Court upheld the telephone company, but the Supreme Court reversed this decision on the same ground which the New York Court of Appeals adopted. In the United States Circuit Court for the Middle District of Tennessee, a similar fight occurred,³ and the electric railway came out victorious. In Louisville, Ky., the same point was brought up in June, 1890.⁴ Even in Utah, the telephone company tried to occupy the field.⁵

In England the fight broke out in the case of National Telephone Co. *v.* Baker,⁶ somewhat after the tide of war had subsided in the United States. Mr. William Sebastian Graff Baker, the defendant, was a contractor who had been employed by the makers of electric railway apparatus in the United States for the purpose of introducing the apparatus in England, and he succeeded in getting the requisite authority from Parliament, and in equipping a tramway for the corporation of Leeds. By his contract with Leeds he was bound to operate the tramway for a trial period, and it was during this period that the telephone company brought suit against him for causing a nuisance to their lines by the operation of his tramway. The court decided in favor of the tramway for reasons which we will examine later.

We have thus seen that the war between the telephone companies and the electric railway companies for the right to occupy the highways with their lines began in the United States about the fall of 1889, and was continued with great energy until the fall of 1892, with results generally favorable to the railways. And the single English case which has been decided on this point reached

¹ 135 N. Y. 393.

² Superior Court, Feb. 12, 1890; Supreme Court, June, 1891, 48 Oh. St. 390.

³ Cumberland Telephone & Telegraph Co. *v.* United Electric Railway Co., 42 Fed. Rep. 273, May, 1890.

⁴ Louisville Bagging Mfg. Co. *v.* Central Passenger Railway Co., Louisville Law & Eq. Court, Pamphlet Opinion.

⁵ Rocky Mountain Bell Telephone Co. *v.* Salt Lake Railway Co., 3d Jud. Dist. Utah Terr., Jan. 1890, Pamphlet Opinion.

⁶ L. R. 1893, 2 Ch. 186, Feb. 4, 1893.

the same conclusion in 1893. Since that time only one case has been decided on this point in the United States.¹

Such is the outline of the history of the subject. Now let us examine the various arguments brought forward by the parties to support their claims. These arguments may be divided into two classes, first, those which assume that both companies have equal legal rights in the highways, and seek to find some equity which will turn the scale in favor of the party adducing the argument, and second, those which seek to show some paramount legal right in one company or the other.

One of the earliest points which attracted the attention of counsel and courts was the comparative expense of making such change in either the trolley line or telephone line as would remedy the difficulty. Would it cost more to put an all-metallic circuit on the telephone, or a double trolley line on the railway? The answer to this question of fact evidently depends upon the circumstances of each case. The referee in *Hudson River Telephone Co. v. Watervliet Turnpike & Railway Co.*, found that in that case it would be less expensive to put in the double trolley system. In other cases the change to an all-metallic circuit for the telephone has been considered cheaper than to change a single trolley railway to a double trolley.² The court in the case cited in the note treated the parties as having equal rights in the use of the streets for their lines, and said that, as the cheaper mode of obviating the difficulty was for the telephone to put in a return circuit, it would have to adopt that course. The variable test of expense, however, was felt to be a very imperfect means of solving the problem. In one case it was well said, "It is immaterial on which party the expense of the change may fall more heavily. It is a question of legal right."³

Another attempt to adjust the difficulty was based on priority of occupation of the streets. This claim the telephone companies asserted with great vigor.⁴ It of course assumes that both parties

¹ *Cumberland Telegraph & Telephone Co. v. United Electric Railway Co.*, 29 S. W. Rep. 104.

² *Cumberland Telephone & Telegraph Co. v. United Electric Railway Co.*, 42 Fed. Rep. 273. Opinion *sub fine*.

³ *Cincinnati Inclined Plane Railway Co. v. City & Suburban Telephone Association*, 48 Oh. St. 390.

⁴ See brief of Edwin A. Countryman and John A. Delehanty, in *Hudson River Telephone Co. v. Watervliet Turnpike & Railway Co.*, 135 N. Y. 393: "The plaintiff being first in possession is first in law and equity."

have equal legal rights in the streets, and the argument is, in effect, that if the telephone, having a legal right to use the streets, does so, and later the railway, having also a legal right, attempts to use the streets, the prior occupation by the telephone company is a sufficient equity to compel the railway to adopt some system that does not interfere with the telephone. This is a strong argument on the equitable principle *qui prior est tempore, potior est jure*, and undoubtedly would have been decisive in the matter, as it has been held in cases between electric light lines and telephone lines, and between various electric light lines,¹ had it not been for the decisive principle which we shall consider later.

This ground of priority was relied upon somewhat by the court in *Hudson River Telephone Co. v. Watervliet Turnpike & Ry. Co.*, when the case came before the General Term of the Supreme Court on its merits.² The court says, "Again it is worthy of consideration that the plaintiff established its plant and prosecuted its business for some years before the use of electricity was known as a motive power for railroads," and cites *Pomeroy on Equitable Jurisprudence*, § 114, that as between parties having only equitable interests, if their equities are in all respects exactly equal, priority of time will give the better equity. The Court of Appeals, however, did not agree with this reasoning.

Another argument which the telephone companies have brought against the electric railway is the danger of accidents caused by it, and its tendency to frighten horses. This argument belongs more accurately to the question whether the electric railway is a proper mode of using the streets for public travel. It is enough to say here that the argument lacks a sufficient foundation in fact to give it much weight.³

The last of the arguments in favor of the telephone line, based on an equality of rights of both parties in the streets, is that the railway company is bound so to use its property that its neighbor, the telephone, shall not be injured by the use. The maxim *Sic*

¹ *Western Union Telegraph Co. v. Guernsey & Scudder Electric Light Co.*, 46 Mo. App. 120; *Nebraska Telephone Co. v. York Gas & Electric Light Co.*, 27 Neb. 284; *Paris Electric Light & Railway Co. v. Southwestern Telegraph & Telephone Co.*, 27 S. W. Rep. 902; *Bell Telephone Co. v. Belleville Electric Light Co.*, 12 Ont. Rep. 571; *Rutland Electric Light Co. v. Marble City Electric Light Co.*, 65 Vt. 337; *Croswell on Electricity*, §§ 223-225.

² 61 Hun, 157.

³ *Hudson River Telephone Co. v. Watervliet Turnpike & Railway Co.*, 135 N. Y. 403; *Louisville Bagging Mfg. Co. v. Central Passenger Railway Co.*, 23 S. W. Rep. 592.

utere tuo ut alienum non lædas is invoked by the telephone companies as decisive of the case. Its argument is that it is legally and peaceably in the possession and operation of its plant in the highway under grants from the proper authorities, when the railway company establishes its lines in the streets and discharges its electric current into the earth in such quantities and of such voltage as to create a nuisance to the operation of the telephone line. This argument was considered in the English case above referred to¹ at some length. The court (Kekewich, J.) says:—

“I cannot see my way to hold that a man who has created, or, if that be inaccurate, has called into special existence an electric current for his own purposes, and who discharges it into the earth beyond his control, is not as responsible for damages which that current does to his neighbor as he would have been if instead he had discharged a stream of water. The electric current may be more erratic than water, and it may be more difficult to calculate or to control its direction or force, but when it is once established that the particular current is the creation of or owes its special existence to the defendant, and is discharged by him, I hold that if it finds its way on to a neighbor's land and there damages the neighbor, the latter has a cause of action.”

The court then proceeds to consider what may be said in avoidance of the legal liability above stated, and says:—

“First, they say that the plaintiff [telephone company] might, by an alteration of their system, that is, by the adoption of what is known as the metallic return, prevent the disturbance complained of. . . . The first answer is, to my mind, without foundation. The man who complains of his land being thrown out of cultivation by the incursion of water escaping from his neighbor's reservoir must not be told that he has no right of action because if he had interposed a wall, or otherwise taken care to protect himself, the water would not have reached his land. He is using the land in a natural way, and is not bound to take extraordinary precautions, and is entitled to rely on his neighbor also using his land in a natural way, or, if he uses it otherwise, taking extraordinary precautions to prevent damage to others therefrom. There is no doubt a body of evidence to show that a system different from that adopted by the plaintiff has been adopted elsewhere with advantage, and may probably prove to be the most convenient, though more expensive for them, but the evidence also proves that their present system has been largely adopted and is approved by many competent to form an opinion. It has also the merits of economy. They are carrying on their business lawfully, and in the

¹ National Telephone Co. v. Baker, L. R. 1893, 2 Ch. 186.

mode which they deem best, and I cannot oblige them to change their system because they might thereby probably enable the defendants to conduct their business without the mischievous consequences now ensuing. True it is that the analogy introduced above fails to this extent, that the plaintiffs are using the land for an extraordinary purpose, but admittedly it is a lawful purpose, and though under an obligation to obviate mischief from their own operation, they are under none, in my judgment, to protect themselves from the defendants or others. The outflow from one reservoir might easily destroy another, but so far as I am aware there is no principle or authority in English law for rejecting a claim for damages by the owner of the latter, on the ground that his user, as well as that of the neighboring owner, was extraordinary."

The court then decides the case in favor of the electric railway on another ground. i. e. statutory authority from Parliament.

I have quoted fully from the foregoing opinion, because I think it expresses the strong argument of the telephone company on this point very clearly. It is difficult to frame any answer to it, supposing the two parties to be on equal terms in the highways. The case in this aspect is very analogous in principle to a case decided in England in 1889,¹ where the facts were that the plaintiff had a wine cellar in the rear of his house, separated from the back of a hotel kept by the defendants by a party wall only. The defendants put up a stove for cooking in the rear of their hotel, and the heat coming through the wall destroyed the usefulness of the plaintiff's cellar for the storage of wine, and an injunction was granted against the defendants using their stove, the court placing its decision upon the ground that a man must not so use his property as to injure his neighbor. A similar principle has often been maintained in cases where smoke or gases are discharged over neighboring land and into neighboring houses, causing a nuisance.² This argument, however, loses its importance in the United States from the fact that there is, as we shall see later, a decisive principle which overrules all the arguments in favor of the telephone companies.

Coming now to the second class of arguments, i. e. those in which one party or the other claims a paramount right in the highways, we find first an argument put forward by the telephone com-

¹ Reinhardt v. Mentasti, L. R. 42 Ch. Div. 685.

² McClung v. North Bend Coal & Coke Co., 9 Oh. Cir. Ct. Rep. 259; Kirchgraber v. Lloyd, 59 Mo. App. 59; Frost v. Berkley Phosphate Co., 20 S. E. Rep. 280; Peacock v. Spitzelberger, 29 S. W. Rep. 877.

panies that they have received from the municipal authorities grants of the right to set their poles and string their wires in the highways, and that this franchise cannot be impaired by a later grant to the electric railway company. This claim, which seems strong at first glance, in reality contains the principle which has subverted the whole telephone case. The claim was strongly asserted by the telephone company in the case of *City & Suburban Telegraph Association v. Cincinnati Inclined Plane Railway Co.*, and the case was in fact decided by the Superior Court in favor of the telephone company on this ground. The court says:—

“To this the plaintiff replies that by virtue of its grant, it acquired, before the defendant had a right to use electricity as a motive power, a vested interest in the telephone system as it now operates it, with a grounded circuit, and that not even the Legislature of the State could take away from it or injure this franchise on the faith of which it has expended so much labor and capital.”¹

And the Superior Court adopted this claim, with the modification that the Legislature *might* take away the telephone company's franchise, but would not be presumed to intend to do so, and that, as its grant to the electric railway of a right to use electricity as a motive power would be satisfied if the double trolley system were used, which would not interfere with the telephones, this mode of use must be presumed to be intended by the Legislature. This view, however, was not upheld by the Supreme Court of that State on appeal in the same case.²

This brings us at last to the important principle upon which two courts of last resort in two most influential States, New York and Ohio, have rested their decisions in favor of the electric railway, and which is in reality decisive in the United States against the claims of the telephone company, viz. that the primary use of the highways is for public travel, and that any other use must be subordinate to this, and consequently a person or company using the highways for such subordinate use cannot complain if some novel mode of public travel interferes with his or its user of the highways. This important principle is followed by the corollary that the telegraph and telephone, not being forms of public travel, if they make use of the highways for their lines, must do so in

¹ Pamphlet Opinion of Hon. W. H. Taft, Feb. 12, 1890.

² *Cincinnati Inclined Plane Railway Co. v. City & Suburban Telegraph Association*, 48 Oh. St. 390.

subordination to the use of the highways for travel by the public. This principle, as stated in the important case of *Hudson River Telephone Co. v. Watervliet Turnpike & Railway Co.*,¹ is as follows: —

“The primary and dominant purpose of a street is for public passage, and any appropriation of it by legislative sanction to other objects must be deemed to be in subordination to this use unless a contrary intent is clearly expressed. The inconvenience and loss which others may suffer from the adoption of a form of locomotion authorized by law, which is carefully and skilfully employed, and which does not destroy or impair the usefulness of the street as a public way, is not sufficient cause for a recovery, unless there is some statute which makes it actionable.”

The same principle is well expressed in the Ohio case: —

“The dominant purpose for which streets in a municipality are dedicated and opened is to facilitate public travel and transportation, and in that view new and improved modes of conveyance by street railways are by law authorized to be constructed, and a franchise granted to a telephone company of constructing and operating its lines along and upon such streets is subordinate to the rights of the public in the streets for the purpose of travel and transportation.”²

This leading principle, that the streets are primarily for public travel, is an extremely important one, and it must be regarded as very fortunate that the courts have protected it so thoroughly in these cases. The same principle has also been well asserted in another direction, when the courts have pronounced that the right of public travel along the highways is paramount even to the crossing of the highways by steam railroads. Of course, for reasons of public advantage, steam railroads are by statute expressly given the right to lay their tracks across the highways, and from the necessity of the case steam trains have the right of way at such crossing, as against travel on the highway; but with these exceptions the paramount right of the public to travel over the highways remains, and therefore, when the question arises as to the right of an electric railway to lay its tracks across the steam railroad tracks on the highways, in the absence of express statutory restrictions, the electric railway may cross with its tracks, and its

¹ 135 N. Y. 393.

² *Cincinnati Inclined Plane Railway Co. v. City & Suburban Telegraph Association*, 48 Oh. St. 390.

overhead wires, provided they are so constructed as not to interfere with the operation of the steam railroad, and it may do this without the permission of the steam railroad and against its wish, because it does so as an authorized form of travel upon the highways.¹

As the right of public travel is thus paramount upon the highways, it follows that the telephone and telegraph lines take their permission from the legislature or municipal authorities subject to this right of travel. This condition will be implied if it is not expressed,² but it is generally expressed in the statutes which give the telephone and telegraph companies the right to use the streets for their lines.³

This being the case, the whole problem of the relation of the telephone lines to the electric railway on the highways is solved at once. To use the language of the court in the final decision on the merits of *Hudson River Telephone Co. v. Watervliet Turnpike & Railway Co.*,⁴—

“There is no question of prior equities involved. It is a matter of strict legal right. Neither priority of grant nor priority of occupation can avail either party. The plaintiff [the telephone company] has a franchise which is entitled to protection, but the prime difficulty it encounters grows out of its subordinate character. It has been given and accepted upon the express condition that it shall not obstruct or interfere with the enjoyment by the defendant of its franchises.”⁵

The telephone companies seem to have acquiesced in the subordinate position on the highways assigned to them by the courts in the foregoing decisions, and have very generally protected their instruments by all-metallic circuits in places where there was likely to be interference with the current of electric railways. This change in construction of the telephone plant has resulted in improved service to the telephone customers so that the introduction of the electric railway may be said to be indirectly a benefit to the users of telephones as well as a direct benefit to the passengers on the railways.

¹ *West Jersey Railroad Co. v. Camden, G. & W. Railway Co.*, 29 Atl. Rep. 423.

² *Hudson River Telephone Co. v. Watervliet Turnpike & Railway Co.*, *supra*.

³ See statutes collected in § 61 of *Croswell on Electricity*.

⁴ 135 N. Y. 393.

⁵ To the same effect is *Cincinnati Inclined Plane Railway Co. v. City & Suburban Telegraph Association*, 48 Oh. St. 390.

A new phase of the case, however, has recently cropped out, which may be the cause of further litigation, although it is not yet in the courts. It has been shown by experts that the effect of the discharge of the electric railway current into the ground near iron pipes such as are used for carrying the underground wires of the various electric companies, as well as water pipes, gas pipes, steam heating pipes, and similar conduits, is to produce electrolysis of the metal, accompanied in case of electric conduits by detriment to the insulating and protecting material. Whether this damage will result in an attempt to compel the electric railways to change their method of construction, and if so what the decision of the courts will be upon the rights of the parties, it is yet too early to predict. It is, however, safe to say that the courts will adequately protect the fundamental principle so important to the community, and so well defended in the cases cited above, that the primary use of public highways is for public travel.

Simon G. Croswell.